

THE SANTA CRUZ RIVER – HOW BAD IS THE WATER?

Sherry Sass 5/15/05

We are fortunate to have a real, live little river in Santa Cruz County—one of the very few left in Arizona. It supports an incredible variety and number of plants and wildlife. But its water quality is compromised by several major pollution sources.

So is the Santa Cruz River a pristine stream, or a toxic cesspool, or something in between? Is it safe to wade in? To drink? Friends of the Santa Cruz River (FOSCR) has been testing the waters under our RiverWatch program since 1992, and has a few answers, as well as many more questions which we will share with you in this and future articles on the river.

A handful of dedicated volunteers—Birdie Stabel and Nick Bleser have been RiverWatch's backbone since it started; Mark Larkin was the program's longtime jefe—have been taking periodic water quality measurements along the river, trained by the Arizona Department of Environmental Quality (ADEQ), which has also loaned us equipment and covers laboratory analysis costs for the program.

Every month, the RiverWatch citizen scientists test the waters at four sites along the river and one on the Nogales Wash, which runs through both cities of Nogales before joining the Santa Cruz. Among other measures, we check for fecal bacteria (from poop of human or animal origin), nitrogen compounds such as ammonia, nitrites, and nitrates; phosphorus; BOD (biological oxygen demand); and sulfates.

Based on our 13 years of testing, we have found excess nitrogen to be a consistent problem in the river. Some forms of nitrogen are especially bad for people to drink, so high levels of nitrogen in the river are worrisome, since almost all drinking water wells pump from the same aquifer, or underground water basin, which the river flows through. Nitrogen pollution is a major reason FOSCR has been urging an upgrade and expansion of the Nogales International Wastewater Treatment Plant in Rio Rico, since that's where most of the river's excess nitrogen (in the form of ammonia—thus that odor) comes from.

So far, all the public wells are fine; they are tested frequently, by law, and are deep enough for most pollutants to be filtered out. But once a drinking water aquifer is contaminated, it is very expensive and difficult to clean up. Also, private wells are often relatively shallow, so are more liable to get contaminated—and testing is the responsibility of the well owner: if you don't test yours regularly, you don't know how safe your water is to drink

RiverWatch only tests for some of the more common markers of water pollution, and although other groups do more extensive testing, they don't check most of the river or most of the time. So no one knows exactly what's in the water from one day (or hour) to the next—as anything dumped upstream in the river, or in the Nogales Wash, can end up in the river.

So is the water safe to drink? Probably not. Besides the ammonia/nitrogen and other problems, remember that cows and horses often poop in it. So NEVER drink river water.

Safe to wade in? It's hard to keep water out of children's mouths once they hit the river, so be careful with your kids. And to be safer, stay out of the water for at least several days after any rains, and never go in the river with open cuts or sores.

For more information, you can go to the Arizona Dept. of Environmental Quality website: www.adeq.gov/environ/water